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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|--------------------------|----------------------------|------------------|
| 09/314,819 | 05/19/1999 | CHRISTOPHER PETER LAROSA | CS10088 | 5679 |
| 7590 06/15/2005 | | | | |
| MOTOTROLA INC PERSONAL COMMUNICATIONS SECTOR INTELLECTUAL PROPERTY DEPARTMENT (PJB) 600 NORTH US HIGHWAY 45 RM AN-481 LIBERTYVILLE, IL 60048 | | | EXAMINER ELALLAM, AHMED | |
| | | | ART UNIT 2662 | PAPER NUMBER |

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/314,819 | | LAROSA ET AL. | |
| | Examiner | | Art Unit | |
| | AHMED ELALLAM | | 2662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-37 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8, 13, 14, 19, 21-23 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 5-7, 9-12, 15-18, 20, 24-26 and 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/04/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Appeal brief filed on 2/29/2005. In view of new art, the prosecution is reopened .

Claims 1-37 are pending, in which claims 1-4, 8, 13, 14, 19, 21-23, and 27-29 are rejected. Claims 5-7, 9-12, 15-18, 20, 24-26, 30-32 are objected to, and claims 33-37 are allowed.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 3, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Butler et al, US (6,243,561). Hereinafter referred to as Butler.

Regarding claim 1, with reference to figure 2, Butler discloses a method for activating a radiotelephone operable in a spread-spectrum multiple access radio telephone system, the method comprising:

Activating a search unit 206, see column 4, lines 55-64,

Receiving a pilot signal, see column 3, lines 65-67 and column 4, lines 1-17.

(Claimed receiving a signal),

Activating a demodulation unit when a quick page message is received, see column 4, lines 55-64, and claim 4. (Corresponding to activating at least a portion of a

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searcher receiver, (the received quick page message is interpreted as being the claimed predetermined event), and activating at least one demodulation branch after the predetermined event occurs, the predetermined event occurring after activating at least a portion of the searcher receiver).

Regarding claim 2, Butler discloses that the received signal is PN pilot signal. See column 3, lines 40-54, and column 4, lines 7-17.

Regarding claim 3, Butler discloses configuring finger elements for performing demodulation of the results of the searcher on stored samples (PN samples), see column 3, lines 13-20. In addition, Butler discloses pilot searching on samples (PN samples) at various time offsets that produces maxima above a predetermined threshold. See column 4, lines 7-17. (Examiner interpreted the demodulation of the pilot signal samples of the maximum energy to be the claimed predetermined event comprises the acquiring a PN sequence timing of a pilot signal that produces correlation energy above a predetermined threshold, because it is after the results of the searcher on the stored samples, that the demodulation unit is activated, and that reads on the claimed event).

Regarding claims 21 and 22, with reference to figure 2, Butler discloses a method for activating a radiotelephone operating in slotted paging mode, the radio telephone operable in CDMA system, the method comprising:

Activating a search unit 206, see column 4, lines 55-64, (claimed activating a searcher receiver),

Receiving a pilot signal. See column 3, lines 40-54, and column 4, lines 7-17.

(Claimed detecting a pilot signal),

Pilot searching on samples (PN samples) at various time offsets that produces a maxima above a predetermined threshold. See column 4, lines 7-17, and configuring finger elements for performing demodulation of the results of the searcher on stored samples (PN samples), see column 3, lines 13-20. (Claimed acquiring a PN sequence timing related to a PN sequence associated with the pilot signal),

Activating a demodulation unit after searching, see column 4, lines 55-64.

(Claimed activating at least the one demodulation branch after activating the searcher receiver).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4, 8, 13, 14, 19, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butler in view of Easton et al, US (6,590,886). Hereinafter referred to as Easton.

Regarding claims 4 and 27, Butler substantially all the limitations of claim 3 as indicated above, except it does not specify synchronizing a demodulation branch (claimed at least a demodulation branch) to the searcher receiver (claimed the at least portion of searcher receiver).

However, Easton discloses directing fingers to adjust their timing reference to the one of the multi-path signals (PN signals) identified by the searcher. See column 4, lines 45-51. (Claimed synchronizing at least a demodulation branch the at least portion of searcher receiver).

Therefore, It would have being obvious to a person of ordinary skill in the art to synchronize the demodulation unit with the searcher of Butler in accordance with the synchronization as taught by Easton so that the receiver can be synchronized with the base station in accordance with the highest correlated values determined by the searcher from received PN sequences. The advantage would be the ability to communicate with the closest base station during a call by the subscriber unit.

Regarding claim 8, with reference to figure 2, Butler discloses a method for activating a radiotelephone operating in slotted paging mode, the radio telephone operable in CDMA system, the method comprising:

Activating a search unit 206, see column 4, lines 55-64, (claimed activating a searcher receiver),

Receiving a pilot signal. See column 3, lines 40-54, and column 4, lines 7-17. (Claimed detecting a pilot signal),

Pilot searching on samples (PN samples) at various time offsets that produces a maxima above a predetermined threshold. See column 4, lines 7-17, and configuring finger elements for performing demodulation of the results of the searcher on stored samples (PN samples), see column 3, lines 13-20. (Claimed acquiring a PN sequence timing related to a PN sequence associated with the pilot signal),

Activating a demodulation unit after searching, see column 4, lines 55-64.

(Claimed activating at least the one demodulation branch after activating the searcher receiver).

Butler doesn't specify synchronizing a finger element to the searcher receiver.

However, Easton discloses directing fingers to adjust their timing reference to the one of the multi-path signals (PN signals) identified by the searcher. See column 4, lines 45-51. (Claimed synchronizing at least a demodulation branch the at least portion of searcher receiver).

Therefore, It would have being obvious to a person of ordinary skill in the art to synchronize the demodulation unit with the searcher of Butler in accordance with the synchronization as taught by Easton so that the receiver can be synchronized with the base station in accordance with the highest correlated values determined by the searcher from received PN sequences. The advantage would be the ability to communicate with the closest base station during a call by the subscriber unit.

Regarding claim 13, Butler discloses configuring finger elements for performing demodulation of the results of the searcher on stored samples (PN samples), see column 3, lines 13-20. In addition, Butler discloses pilot searching on samples (PN samples) at various time offsets that produces a maximum above a predetermined threshold. See column 4, lines 7-17. (Examiner interpreted the configuring of the demodulation of the pilot signal samples having the maximum energy and configuring the finger elements to perform demodulation based on the searched results as being

the claimed demodulation branch is activated after acquiring the PN sequence timing related to the PN sequence associated with the pilot signal).

Regarding claim 14, Butler, with reference to figure 2, discloses an apparatus for operating a code division multiple access (CDMA) radio telephone in a slotted paging mode, see column 2, lines 53-59, the apparatus comprising:

a searcher receiver 206, performs pilot searching on stored samples, see column 3, line 65-67 column 4, lines 1-6, the samples are collected and received during a during a paging slot, (Examiner interpreted the fact that the searcher searches the stored sample as equivalent to activating the searcher after the storing of the samples, because there is no need to activate the searcher prior to the storing, and that reads on the claimed activation of the searcher receiver), In addition, Butler discloses pilot searching on samples (PN samples) at various time offsets that produces a maxima above a predetermined threshold . See column 4, lines 7-17, and configuring finger elements (claimed at least one demodulation branch coupled to the searcher receiver) for performing demodulation of the results of the searcher on stored samples (PN samples), see column 3, lines 13-20.

A control unit 210 for controlling the finger elements and the searcher functions, see column 3, lines 10-12, and lines 16-20.

The difference between Butler and claim 14 is that Butler does not specify that the finger elements synchronize relative to the searcher receiver under the direction of the control unit.

However, Easton discloses directing fingers to adjust their timing reference to the one of the multi-path signals (PN signals) identified by the searcher. See column 4, lines 45-51. (Claimed synchronizing at least a demodulation branch the at least portion of searcher receiver).

Therefore, It would have being obvious to a person of ordinary skill in the art to incorporate the synchronization of Easton within the control unit of Butler so that the receiver can be synchronized with the base station in accordance with the highest correlated values determined by the searcher from received PN sequences. The advantage would be the ability to communicate with the closest base station during a call by the subscriber unit, and using the same integrated circuit for controlling both the searcher and the finger elements resulting in small size wireless unit.

Regarding claim 19, Butler, with reference to figure 4, discloses PN generator 404 coupled to the searcher receiver, claimed the apparatus further comprising a real time PN generator.

Regarding claim 28, Easton discloses substantially all the limitations of the parent claim 22 as indicated above, except it does not give the details of synchronizing the finger elements to the searcher receiver after acquiring the PN sequence timing of the PN sequence associated with the pilot signal.

However, Easton discloses directing fingers to adjust their timing reference to the one of the multi-path signals (PN signals) identified by the searcher after acquisition of the pilot signal. See column 4, lines 38-49.

Therefore, It would have being obvious to a person of ordinary skill in the art to synchronize the finger elements in accordance with Easton teaching so that Butler receiver can be synchronized with the base station in accordance with the determined highest correlated values used in acquiring the pilot signal. The advantage would be the ability to align the receiver of butler with the base station providing the strongest pilot signal.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being obvious over Butler in view of Zou et al. Hereinafter referred to as Zou.

Regarding claim 23, Butler discloses all the limitations of parent claim 22 as indicated above. However Butler doesn't give the details of slewing a PN timing of the searcher receiver to the PN sequence timing of the pilot signal and synchronizing the finger elements to the PN timing of the searcher receiver after slewing the PN timing of the searcher receiver.

However, Zou discloses slewing searcher timing to the PN sequence timing of the pilot signal, and inserting the proper time offset by the finger to its PN to communicate with the base station (Examiner interpreted this feature of being the claimed slewing a PN timing of the searcher receiver to the PN sequence timing of the pilot signal and synchronizing the finger elements to the PN timing of the searcher receiver after slewing the PN timing of the searcher receiver). See abstract, column 2, lines 8-27, and column 3, lines 42-61.

Therefore it would have being obvious to a person of ordinary skill in the art, at the time the invention was made to implement the slewing of the PN timing of Butler searcher to the detected pilot signal along with the alignment of the finger element PN timing with that of the searcher receiver PN timing so that the receiver of Butler can be in synchrony with the base station that provides the strongest pilot signal. The advantage would be the implementation of the inherent requirement of receiver PN sequence alignment to the closest base station (Zou, column 2, lines 8-10).

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Butler in view of Easton as applied to claim 28 above, and further in view of Zou.

Regarding claim 29, as indicated above, Butler in view of Easton disclose all the limitations of parent claim 28, except they do not specify slewing finger element (claimed demodulation branch) to the PN sequence timing of the PN sequence timing of the PN sequence associated with the pilot signal.

However, Zou discloses inserting the proper time offset by the finger to its PN to communicate with the base station after acquiring the PN timing by the searcher. See abstract, column 2, lines 8-27, and column 3, lines 42-61.

It would have being obvious to a person of ordinary skill in the art, at the time the invention was made to implement the slewing of Zou to the fingers of Butler in view of Easton so that the receiver of Butler in view of Easton can be in synchrony with the base station that provides the strongest pilot signal. The advantage would be the

implementation of the inherent requirement of receiver PN sequence alignment to the closest base station (Zou, column 2, lines 8-10).

Response to Arguments

6. Applicant's arguments with respect to claim 1-37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Naruse et al, US (6,075,811); Tran, US (6,267,075).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHMED ELALLAM
Examiner
Art Unit 2662
June 7, 2005



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